Sustainability Starts at Home

For a modest investment, you can greatly improve household energy efficiency, save money, and lower your environmental impact

Sustainability is easily defined:

> ***The process of using and developing resources without depleting them for future generations.***

What doesn't seem so easy is practicing sustainability in our businesses and everyday lives. Yet in a world where climate change is wreaking havoc, from massive forest fires in Canada to crumbling ice shelves in Antarctica, sustainability is more important than ever.

But what can we as individuals do? Must we abandon our comfy homes for solitary yurts in the woods? No power. No running water. No cars. No cable. No streaming. No local transit. No binging (unless you enjoy wild bearberries). No Target runs? What in the name of Minnesota Nice is sustainable about that?

But we don't have to take an all or nothing approach. When done right, sustainability sustains our way of life without making the lives of our children, grandchildren, and great-grandchildren, well, unsustainable. Sustainable living can also make our money go further through savings from clean and energy-efficient technologies.

And you don't have to carpet your roof with solar panels, install a wind farm in your backyard, or wrench your north-facing home from its foundation and spin it to a southern exposure. Sustainability can begin with a few cost-effective investments.

Heating, cooling, and saving big bucks with heat pumps

Consider the heat pump, a remarkable technology that extracts heat from cold air and pours cool air into hot. To those without degrees in engineering or physics, the machine's inner workings seem like alchemy (but it's really more like a two-way air conditioner). Can it also turn lead into gold? Not exactly, but it can slash your heating and cooling costs.

T.J. Simon, broker and co-owner of Wolf & Simon real estate in Park Rapids, took advantage of incentives offered by a local utility, Itasca-Mantrap Electric Cooperative, and purchased a heat pump for one of his cabin properties.

"They're about 200 to 250 percent efficient," Simon estimated. "And can keep the cabin comfortably warm even when it's as low as -30F outside. After that, the propane heat kicks in." It should be noted that most heat pumps will operate at peak efficiency in temperatures as low as -13F, according to the Center for Energy and Environment. Newer models, like Simon's, are rated for even lower temperatures.

Before installing the unit, Simon used about 800 gallons of propane to heat his cabin through the winter—about $1,600 based on the price per gallon in January. Now, he averages about 400 gallons a year. Since purchasing that first full-size unit, he bought several smaller wall-mounted mini-split heat pumps for another cabin, and his real estate office.

"In rural Minnesota where so many people rely on propane for heating, heat pumps make a lot of sense economically," Simon observed, adding that after rebates from the electric co-op, homeowners can expect to pay about $5,000 for a fully installed heat pump, depending on the unit's size and configuration. Given the current price of fuel, the heat pump will pay for itself in a few years. If well maintained, heat pumps can last between 15–25 years.

Stewarding lands and lakes for now and always

Of course, one of the main draws to life in Park Rapids is proximity to clean, clear lakes, miles of pristine shoreline, and deep, verdant woodlands. Recreational tourism is a big economic engine. Visitors ply the lakes in boats, on water skis, and go fishing in the summer. They hunt the big woods in the fall, and head back to the lakes for ice fishing and snowmobiling in the winter. It's a year-round business that makes a good livelihood for the town's restaurants, pubs, and shops. And with broadband Internet untethering so many workers from urban offices, lake real estate is a growing destination for newcomers. But with development comes a host of environmental pressures.

"The lakes are central to our way of life in Northern Minnesota. They're why we live here. But as more homes and developments go up, it gets harder to keep them clean and healthy," Simon noted. "We have to plan carefully and take preventative measures." To protect the lakes and landscape, Hubbard County mandates that new homes must adhere to minimum setbacks from the lake, and wetland barriers maintained. Defoliation is discouraged so properties retain as many trees and native flora as possible. Lawns can't hug the shoreline, and nitrogen-rich fertilizers are forbidden because of their impact on the aquatic ecosystem. Even sandy beaches are discouraged because when they run off into the water those patches of lake become inhospitable to a range of fish. Septic tanks are strictly regulated to prevent seepage and contamination. Although all the rules might seem draconian, Simon recognizes that the consequences of breaking them are enormous.

"If we use up resources based only on what we want and need today, there won't be much left for the people who come after us," said Simon. "The biggest thing is keeping our lakes available, keeping them pristine. It's important to make sure we're using the water, lake properties, and woodlands in the correct way because they're all interconnected. What you do in the woods or the farm fields eventually impacts the lakes. And vice-versa, too."

Realtors® advocating for sustainability

As an industry, Simon believes that Realtors® have an opportunity to advance sustainability efforts across the state. By staying current with energy-efficient practices and technologies—both in new construction and in existing homes—they can help clients shrink their environmental impact, and save a significant chunk of money, too.

"When a client tells you about an inefficient old heater that's costing a fortune to run and maintain, you can educate them about the advantages of heat pumps—and the rebates and incentives that are available," Simon suggested. Additionally, through the Inflation Reduction Act, the federal government offers tax breaks of up to $2,000 for qualifying homeowners who install heat pumps.

"There's a whole range of technologies to consider, from solar on the rooftop to super-insulating foam in the walls. As Realtors® we're in a great position to be educators, helping people save money on the total cost of ownership while lowering the environmental cost to the planet," said Simon.

Bottom Left: MNR Past President T.J. Simon and his dog out for a fall hunt in one of Minnesota's many wetland areas

NAR Sustainability Summit Comes to Minneapolis June 4-5

From Absolute Zero to Energy Superstar

A short history of heat pumps

Heat pumps are decidedly low tech—more Steampunk than Silicon Valley. Based on principles of refrigeration developed by Lord Kelvin (who redefined chill by discovering absolute zero), the first heat pump was built in 1856 by Austrian Peter Von Rittenger for extracting dry salt from marsh water. Apart from filling the saltshakers of dinner tables across Austria, Von Rittenger's invention was largely overlooked for almost a century.

All that changed in 1945 when a British electrical engineer, John Sumner, innovated a heat pump system from salvaged refrigeration components. Although it heated just one building—the Norwich City Council Electrical Department—it laid the foundation for all heat pumps to follow. A few years later, a larger-scale system was deployed in Oregon. However, given the abundance of cheap coal and oil, heat pumps were little more than a curiosity for tinkerers and engineers until wide-spread oil shortages crippled western economies in the 1970s. The crisis, fused with nascent awareness of global warming, moved heat pumps to the center stage of energy-efficient technologies.

Today, sales of heat pumps are rising across the world. Carbon Brief, a publication that tracks climate science and energy policy, reports that in Norway, which has one of Europe's coldest climates, more than 60% of households now use heat pumps. And its chilly neighbors, Sweden and Finland are rapidly approaching half of all households. Although the United States has been slower to adopt heat pumps—just 15% of residences have them—rebates and tax incentives, such as rebates from the Inflation Reduction Act—are increasing their popularity, particularly in rural regions that rely on propane and electrical heating.

Leaders from across the sustainable development landscape will gather in Minneapolis June 4–5 for the National Association of Realtors® (NAR) Sustainability Summit. Exploring the four pillars of sustainability, Realtors® will learn about:

1. **Advancements in creating positive environmental impacts**
2. **Efforts to increase education and promote equity and well-being**
3. **Achievements in integrating sustainable practices at state and local associations**
4. **Plans and actions for managing and reducing climate risk in communities**

A closer look at Minnesota Realtors®' (MNR) plans to expand sustainable practices in the real estate industry will be presented by Donnie Brown, MNR director of Diversity and Sustainability and Todd Shipman, past chair of the NAR Sustainability Advisory Group, and associate broker at Lakes Sotheby's International Realty in Edina.